

SECTION 905 -- PROPOSAL (CONTINUED)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for **five percent (5%) of total bid** and hereby agree that in case of my (our) failure to execute the contract and furnish bond within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the State of Mississippi as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. <u>1</u>	DATED <u>1/13/2009</u>	ADDENDUM NO. _____	DATED _____
ADDENDUM NO. _____	DATED _____	ADDENDUM NO. _____	DATED _____

Number	Description
1	Rev. Table of Cont., replaces same; Add NTB 2239; Add NTB 2257; Rev. SP 907-804-9, replaces same; NTB 2193, replaces 2170; Rev. Bid Bond, replaces same; Amendment EBS Download Required.

TOTAL ADDENDA: 1
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE _____

Contractor

BY _____
Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

E-MAIL _____

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of _____ and the names, titles and business addresses of the executives are as follows:

_____ President	_____ Address
_____ Secretary	_____ Address
_____ Treasurer	_____ Address

The following is my (our) itemized proposal.

Revised 09/21/2005

BR-0022-02(049) / 104632301

Neshoba County(ies)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET
OF SECTION 905 AS ADDENDA)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2239

CODE: (SP)

DATE: 01/06/2009

SUBJECT: Department of Labor Ruling

On December 19, 2008 the U.S. Department of Labor issued a final rule revising their regulations in 29 CFR Parts 3 and 5. This rule takes effect for all Federal funded contracts awarded after January 19, 2009.

The primary change in the rule is a provision that requires Contractors to limit the amount of personal information on the weekly payroll submissions. Personal addresses and full social security numbers may no longer be used. Contractors must use an "... individually identifying number for each employee (e.g., the last four digits of the employee's social security number)." Form FHWA1273 - "Required Contract Provisions Federal-aid Construction Contracts" will eventually be revised to reflect this change.

Until the revised is made to FHWA-1273, bidders are advised to disregard any requirement in FHWA-1273 regarding the use of personal addresses and full social security numbers, such as in Section V, Paragraph 2b.

Bidders are also advised that the requirement for maintaining and submitting form FHWA-47, as referenced in FHWA-1273 Section VI, is no longer required on construction projects.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2257

CODE: (SP)

DATE: 09/18/2008

SUBJECT: Minutes of Pre-Bid Meetings

PROJECT: BR-0022-02(049) / 104632301 -- Neshoba County

A pre-bid meeting was held for the above project at 9:00 A.M. on Wednesday, December 10, 2008 in the first floor Auditorium of the Mississippi Department of Transportation Administration Building. Attached are answers to questions that were asked and a list of attendees.



Mississippi Department of Transportation

Pre Bid Conference

Sign In Sheet

Project No. BR-0022-02(049) / 104632301 -- Neshoba County

December 10, 2008

[illegible]

**Questions/Comments from Pre-Bid Meeting for Special Provision 907-804-9 – Concrete Bridge Decks
for
Project Number BR-0022-02(049) / 104632301 – Neshoba County
10 December 2008, 9:00 am**

Moderated by Adam Browne

Questions

1. Are the concrete mixture design requirements currently in use now?

Yes. Many large retail stores have similar specifications for their concrete floors. Local concrete producers supplying concrete for these stores have worked with these specifications. Additionally, these mixture design requirements follow the current best industry recognized practices.

2. Why is water not allowed as a finishing aid?

Adding water to the surface of concrete and working it into the concrete leads to delamination.

3. Can a commercially available finishing aid be used?

If this were proposed by a Contractor, the Department would need to research this. Currently there is no approved list maintained by the Department for finishing aids. Many finishing aids are primarily water.

4. Are walking and other construction traffic allowed on the bridge deck?

Walking would be allowed provided that in areas where the curing compound is marred these areas are recovered with curing compound. No construction traffic is allowed until the 10 day curing has elapsed and the required compressive strength of the concrete is obtained.

5. Is this special provision being used on a trial basis or is it being widely used?

This is a pilot project for learning how the recommendations of the pool-funded research project headed by the University of Kansas perform with our local materials.

6. How actively involved in the project will you (referring to Adam Browne) be?

As involved as allowed, especially in the area of installing and monitoring maturity and relative humidity instrumentation in the bridge deck.

7. Many large retailers in our local areas have terrible parking lots. Do we want to do something similar if we know they see poor performance?

The retailers use similar specifications for their interior slabs and not their parking lots.

8. Is all the other concrete for the bridge tested under the current QC/QA program?

Yes. The Department will conduct and complete all testing for acceptance of the Class BD concrete. The rest of the concrete for the bridge will be addressed by the current QC/QA program.

Comments

1. In previous projects with the Federal government with specifications requiring a total air content between 8 and 10%, it has been difficult to develop the required strength and total air content with less than 8 to 8.5 sacks (752 to 799 lbs) of cement per cubic yard of concrete.

2. There is a typographical error in the last sentence of subsection 907-804.03.19.7.3. This paragraph should be as follows:

“Regardless of the finish, the requirements for curing per Subsection 907-804.03.17 shall be completed within the specified time limits.”

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-804-9

CODE: (SP)

DATE: 12/04/2008

SUBJECT: Concrete Bridge Decks

PROJECT: BR-0022-02(049) / 104632301 -- Neshoba County

Section 804, Concrete Bridges And Structures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as amended by this special provision is applicable to Concrete Bridge Decks Only.

907-804.01--Description. Delete the paragraphs in Subsection 804.01 on page 846 and substitute the following:

This work consists of constructing concrete bridges decks in accordance with these specifications and in reasonably close conformity with the dimensions, designs, lines, and grades indicated on the plans or established.

907-804.02--Materials.

907-804.02.1--General. Delete the first paragraph in Subsection 804.02.1 on page 846 and substitute the following:

Concrete produced and controlled from this specification shall be accepted upon proper certification of concrete production through an approved quality control program and verification by job site acceptance criteria. The Contractor shall develop and implement a quality control program that will be used to maintain the required properties of concrete. Quality control and acceptance shall be achieved by individual test results.

907-804.02.6--Classification and Uses of Concrete. Delete numbered items (1) through (9) in the second paragraph in Subsection 804.02.6 on page 848 and substitute the following:

(1) Class BD - Bridge Decks

907-804.02.8--Laboratory Accreditation. In Table 1 of Subsection 804.02.8 on page 849, change AASHTO: T 126 "Making and Curing Concrete Test Specimens in the Laboratory" to AASHTO: R 39 "Making and Curing Concrete Test Specimens in the Laboratory".

907-804.02.9--Testing Personnel. Delete Table 2 in this subsection and replace it with the following.

Table 2

Concrete Technician's Tasks	Test Method Required	Certification Required**
Sampling or Testing of Plastic Concrete	AASHTO Designation: T 23, T 119, T 121, T 141, T 152, T 196, and ASTM Designation: C 1064	MDOT Class I certification
Compressive Strength Testing of Concrete Cylinders	AASHTO Designation: T 22 and T 231	MDOT Concrete Strength Testing Technician certification
Sampling of Aggregates	AASHTO Designation: T 2	Work under the supervision of an MDOT Class II certified technician
Testing of Aggregates	AASHTO Designation: T 19, T 27, T 84, T 85, T 248, and T 255	MDOT Class II certification
Proportioning of Concrete Mixtures*	AASHTO Designation: M 157 and R 39	MDOT Class III
Interpretation and Application of Maturity Meter Readings	AASHTO Designation: T 325 and ASTM Designation: C 1074	MDOT Class III or Two hours maturity method training

* Technicians making concrete test specimens for meeting the requirements of Subsection 804.02.10.1.2 shall be MDOT Class I certified and under the direct supervision of an MDOT Class III certified technician.

** MDOT Class I certification encompasses the same test procedures and specifications as ACI Concrete Field Testing Technician Grade I. MDOT Class II certification encompasses the same test procedures and specifications as ACI Aggregate Testing Technician - Level 1. MDOT Concrete Strength Testing Technician encompasses the same test procedures and specifications as ACI Concrete Strength Testing certification.

For specifics about the requirements for each level of certification, please refer to the latest edition of the Department's *Concrete Field Manual*. Technicians holding current MDOT Class I, MDOT Class II, and/or MDOT Class III certifications shall be acceptable until those certifications expire. Upon a current certification expiration, recertification with the certifications listed in Table 2 shall be required. Technicians currently performing either specific gravity testing of aggregates or compressive strength tests shall be required to either:

- have the required MDOT certification listed in Table 2, or
- have a current MDOT Class III certification or work under the direct supervision of current MDOT Class III technician, and have demonstrated the specific gravity and/or compressive strength test during the inspection of laboratory equipment by the Materials Division, Concrete Section.

Delete the title of Subsection 804.02.10 on page 850 and substitute the following:

907-804.02.10--Portland Cement Concrete Mixture Design.

Delete Table 3 and the Notes under Table 3 in Subsection 804.02.10 on pages 850 & 851 and substitute the following:

Table 3
MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN

CLASS	COARSE AGGREGATE SIZE NO.	MAXIMUM WATER/ CEMENTITIOUS RATIO	SPECIFIED COMPRESSIVE STRENGTH (f'_c) psi	NOMINAL SLUMP inches	TOTAL AIR CONTENT %
BD *	57**	0.43 – 0.45***	4000	3****	6.0 to 8.0

* An approved synthetic structural fiber meeting the requirements of Special Provision 907-711, Synthetic Structural Fiber Reinforcement, shall be incorporated into the mixture at 3.0 lbs per cubic yard.

** Maximum size aggregate shall conform to the concrete mixture design for the specified aggregate. The combined aggregate gradation shall also meet the requirements of Subsection 907-804.02.10.1.b with a maximum of 95 percent passing the 1-inch sieve.

*** The cementitious materials shall meet the requirements of Subsection 907-804.02.10.1.a.

**** The use of chemical admixtures shall meet the requirements of Subsection 907-804.02.10.1.c. A nominal slump less than three (3) inches may be selected by the Contractor provided the concrete can be satisfactorily placed, consolidated, and finished. The tolerances for nominal slump shall meet those set forth in Table 4 of AASHTO Designation: M157.

Delete the last paragraph of Subsection 804.02.10 on page 851 and substitute the following:

Any combinations of chemical admixtures shall be approved by the Engineer before their use.

Delete Subsection 804.02.10.1 on page 851 and substitute the following:

907-804.02.10.1--Proportioning of Portland Cement Concrete Mixture Design.

Proportioning of Portland cement concrete shall be based on an existing mixture of which the producer has field experience and documentation or based on a recently batched laboratory mixture tested according to the required specifications.

Additionally, only proposed mixtures meeting the following additional requirements shall be tentatively approved for use in construction of concrete bridge decks.

- a) Cementitious Materials

- 1) The maximum cementitious material content of the proposed mixture shall be 564 lbs.
 - 2) Only Type I, Type I-MS, or Type II Portland cements shall be used or used in combination with GGBFS, as allowed
 - 3) The replacement limits of Portland cement by weight by other cementitious materials (such as GGBFS) shall be in accordance with the values in Subsection 701.02.
- b) Aggregate Gradation
- 1) The combined aggregate gradation of the proposed mixture shall be optimized using a proven optimization method, such as the KU Mix Method or the Coarseness Factor Chart method described in ACI 302.1, section 6.3.2. Any optimization method may be chosen for mixture proportioning, but once an optimization method is chosen, it shall be adhered to for the life of the mixture. The limits on adjusted workability factor (AWF) and coarseness factor (CF) described by the equations in 3) and 4) shall apply regardless of the optimization method chosen.
 - 2) For additional information on the KU Mix Method and the ACI Coarseness Factor Chart method, refer to the Department's *Concrete Field Manual*.
 - 3) The AWF of the mixture shall be within the limits described by the following equations:

$$AWF_{\text{upper limit}} = 36 + \sqrt{16 - \left(\frac{4}{13}\right)^2 \times (CF - 61)^2}$$

$$AWF_{\text{lower limit}} = 36 - \sqrt{16 - \left(\frac{4}{13}\right)^2 \times (CF - 61)^2}$$

- 4) The CF of the mixture shall be within the limits described by the following equations:

$$CF_{\text{upper limit}} = 61 + \sqrt{169 - \left(\frac{13}{4}\right)^2 \times (AWF - 36)^2}$$

$$CF_{\text{lower limit}} = 61 - \sqrt{169 - \left(\frac{13}{4}\right)^2 \times (AWF - 36)^2}$$

- 5) The AWF and CF for each mixture shall be established following the requirements of the Department's *Concrete Field Manual*, Paragraph 5.5.5.
- c) Chemical Admixtures: Either a Type A or Type D chemical admixture shall be used. The Contractor may elect to submit two mixture designs, one containing a Type A chemical admixture and one containing a Type D chemical admixture. Additionally, the Contractor may elect to submit one mixture design containing a single chemical admixture classified as both as a Type A and a Type D provided the chemical admixture meets the requirements for dual usage in accordance with Special Provision 907-713, Admixtures for Concrete. Mixture designs containing two or more admixtures will not be approved.

- d) Compressive Strength/Maturity Relationship: The compressive strength/maturity relationship shall be developed for the mixture design for a minimum of 28 days following the requirements of Subsection 907-804.03.15. The compressive strength/maturity relationship information shall be submitted with the mixture design information.

907-804.02.10.1.1--Proportioning on the Basis of Previous Field Experience of Trial Mixtures. Delete the first sentence of the first paragraph of Subsection 804.02.10.1.1 on page 851, and substitute the following:

Where a concrete production facility has a record, based on at least 10 consecutive strength tests from at least 10 different batches within the past 12 months from a mixture not previously used on Department projects, the standard deviation shall be calculated.

907-804.02.10.1.2--Proportioning on the Basis of Laboratory Trial Mixtures. Delete the contents of Subsection 804.02.10.1.2 on pages 852 & 853 and substitute the following:

When an acceptable record of field test results is not available, concrete proportions shall be established based on laboratory trial mixtures meeting the following restrictions:

- a) The combination of materials shall be those intended for use in the proposed work.
- b) Trial mixtures having proportions and consistencies suitable for the proposed work shall be made in accordance with the requirements herein specified.
- c) Trial mixtures shall be designed to produce a slump within $\pm 3/4$ in. of the design slump, and for air-entrained concrete, 8.0 ± 0.5 percent total air content. The temperature of freshly mixed concrete in trial mixtures shall be reported.

For each proposed mixture, at least three compressive test cylinders shall be made and cured in accordance with AASHTO Designation: T 126. Each change of water-cementitious ratio shall be considered a new mixture. The cylinders shall be tested for strength in accordance with AASHTO Designation: T 22 and shall be tested at 28 days.

- d) The required average strength of laboratory trial mixtures shall exceed f'_c .
- e) The laboratory trial batch mixtures shall have been made within the previous 12 months before being submitted for approval and shall not have been previously used on Department projects.

Delete Subsection 804.02.10.3 on page 853 and substitute the following:

907-804.02.10.3--Field Verification of Concrete Mixture Design. Concrete mixture designs will only be tentatively approved pending field verification. Mixture designs may be transferred to other projects without additional field verification testing, once the mixture design has passed the field verification process.

The Contractor's Certified Quality Control Technicians shall test each concrete mixture design prior to the first placement of the mixture on the project and not on a Department project. Prior to discharge of the concrete for testing, the batch shall undergo a simulated haul to the job site such that the batch is mixed and agitated for a time comparable to that during normal production. Aggregates and concrete tests shall be as follows:

<u>Aggregates</u>	<u>Concrete</u>
Bulk Specific Gravity	Water Content
Moisture	Slump
Gradation	Air Content
	Unit Weight
	Yield
	AWF and CF

The mixture shall be verified to yield within 2.0% of the correct volume when all the mix water is added to the batch, producing a slump within a 1-inch tolerance of the designed slump, producing a total air content within a minus 1½ percent tolerance of the maximum allowable air content listed in Table 3, and having an AWF and CF within the job control limits listed in Subsection 907-804.02.13.1.6. The mixture shall be adjusted in accordance with Subsection 907-804.02.10.4 and retested, if necessary, on subsequent placements not on a Department project until the above mentioned properties are met. The mixture design shall not be used on a Department project until all the requirements for field verification have been met in one batching of mixture. Any mixture design adjustments, changes in the mixture proportions, are to be made by a Class III Certified Technician representing the Contractor. After the mixture design has been verified and adjustments made, verification test results will be reviewed by the Engineer.

Delete Subsection 804.02.10.4 on page 854 and substitute the following:

907-804.02.10.4--Adjustments of Mixture Designs. The mixture may be adjusted by the Class III Certified Technician representing the Contractor in accordance with the allowable revisions listed in the Department's *Concrete Field Manual*, Paragraph 5.7. Written notification shall be submitted to the Engineer a minimum of seven (7) days prior to any source or brand of material change, allowable material type change, or decrease in any cementitious material content. Any adjustments of the concrete mixture design shall necessitate repeat of field verification procedure as described in Subsection 907-804.02.10.3 and approval by the Engineer.

When it has been determined that the AWF and CF are outside the control limits of Subsection 907-804.02.13.1.6, before the next batch of concrete is produced the MDOT Class III technician representing the Contractor shall adjust the aggregate proportions of the mixture to conform with the requirements of Subsection 907-804.02.13.1.6 and to produce satisfactory results at the job site.

Delete Subsection 804.02.11 on page 854 and substitute the following:

907-804.02.11--Concrete Batch Plants. The concrete batch plant shall meet the requirements of the National Ready Mixed Concrete Association *Quality Control Manual, Section 3, Plant Certification Checklist* as outlined in the latest edition of the Department's *Concrete Field*

Manual. The Contractor shall submit a copy of the approved checklist along with proof of calibration of batching equipment, i.e., scales, water meter, and admixture dispenser, to the Engineer 30 days prior to the production of concrete.

For large volume projects the concrete batch plant shall meet the requirements for an automatic system capable of recording batch weights. It shall also have automatic moisture compensation for the fine aggregate. For small volume projects, the concrete batch plant can be equipped for manual batching with a fine aggregate moisture meter visible to the plant operator.

The concrete batch plant shall have available adequate facilities to cool concrete during hot weather.

Mixer trucks to be used on the project are to be listed in the checklist and shall meet the requirements of the checklist.

907-804.02.12--Contractor's Quality Control. Delete the second and third sentences of the fourth paragraph in Subsection 804.02.12 on pages 854 & 855 and substitute the following:

The requirement of AASHTO Designation: M 157, Section 11.7 shall be followed except, on arrival to the job site no water may be added to the truck after the initial introduction of mix water.

907-804.02.12.1.1--Elements of Plan. After item 3) in Subsection 804.02.1.1 on page 855, add the following:

4) Construction of Concrete Bridge Decks, including the following:

- a description of the equipment for determining the evaporation rate in accordance with Subsection 907-804.03.17
- a description of the equipment used for placing concrete on the bridge deck in accordance with Subsection 907-804.03.6 and, as applicable, Subsections 907-804.03.7 and 907-804.03.8
- a description of and the number of pieces of equipment used to consolidate the concrete in accordance with Subsection 907-804.03.6.2
- a description of the equipment used to finish the bridge deck in accordance with Subsection 907-804.03.19.7
- the plan for ensuring a continuous rate of finishing the bridge deck without delaying the application of curing materials within the time specified in Subsection 907-804.03.17, including ensuring a continuous supply of concrete throughout the placement with an adequate quantity of concrete to complete the deck and filling diaphragms and end walls in advance of deck placement, and
- the plan for applying the curing materials within the time specified in Subsection 907-804.03.17
- a description of the equipment used to apply the liquid membrane, including but not limited to, the nozzles, pumping/pressurization equipment, and liquid membrane tanks, in accordance with Subsection 907-804.03.17
- the method for determining the rate of applied liquid membrane meets the application rate requirements in accordance with Subsection 907-804.03.17

The Plan shall be submitted to the Engineer at the Preconstruction Conference, or no later than 30 calendar days prior to beginning construction of the bridge deck.

907-804.02.12.3--Documentation. After the second sentence of the second paragraph of Subsection 804.02.12.3 on page 856, add the following:

Batch tickets and gradation data shall be documented in accordance with Department requirements. Batch tickets shall contain all the information in AASHTO Designation: M157, Section 16 including the additional information in Subsection 16.2 with the following exception: the information listed in paragraphs 16.2.7 and 16.2.8 is not required. Batch tickets shall also contain the concrete producer's permanent unique mix number assigned to the concrete mix design.

907-804.02.12.5--Non-Conforming Materials. Delete lines B and C of Table 4 in Subsection 804.02.12.5 and substitute the following:

B. AGGREGATES*		
1. Sampling		T 2
2. Fine Aggregate		
a. Gradation / FM	Prior to transportation of each day's first batch, but no more 24 hours before the placement, and once for each 250 yd ³ concrete thereafter	T 27
b. Moisture	Check results from meter against test results weekly	T 255
c. Specific Gravity / Absorption	2500 yd ³ concrete	T 84
3. Coarse Aggregates		
a. Gradation	Prior to transportation of each day's first batch, but no more 24 hours before the placement, and once for each 250 yd ³ concrete thereafter	T 27
b. Moisture	Once daily or more as needed to control production	T 255
c. Specific Gravity / Absorption	2500 yd ³ concrete	T 85
4. Coarseness Factor / Adjusted Workability Factor	Prior to transportation of On the first batch from each day and once for each 250 yd ³ concrete thereafter	<i>Concrete Field Manual, Paragraph 5.5.5</i>

* Determine the gradation of each aggregate within a sufficiently short time prior to batching concrete such that the sample of aggregate tested represents the materials in the batch.

Delete Subsection 804.02.13 on pages 857 through 861 and substitute the following:

907-804.02.13--Quality Assurance Sampling and Testing. Quality Assurance (QA) inspection and testing will be provided by the Department to assure that the Contractor's Quality Control (QC) testing meets the requirements of these specifications.

Acceptance of the material is based on the inspection of the construction, monitoring of the Contractor's quality control program, QC test results, and the comparison of the QA test results with the QC test results. The Department may use the results of the Contractor's QC tests as a part of the acceptance procedures instead of the results of QA tests, provided:

- a) The Department's inspection and monitoring activities indicate that the Contractor is following the approved Quality Control program and, respectively,
- b) For aggregates, the results from the Contractor's QC and the Department's QA testing of aggregate gradations compare by both meeting the job control limits per Subsection 907-804.02.13.1.6;

The minimum frequency for QA testing of aggregate and plastic concrete by the Department will follow the frequencies listed in Table 5, "DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE".

TABLE 5
DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE

Quality Assurance Tests	Frequency	AASHTO/ASTM Designation
A. AGGREGATES		
1. Sampling		T 2
2. Fine Aggregate Gradation and FM	Prior to transportation of each day's first batch, but no more 24 hours before the placement, and once for each 250 yd ³ concrete thereafter	T 27
3. Coarse Aggregates Gradation	Prior to transportation of each day's first batch, but no more 24 hours before the placement, and once for each 250 yd ³ concrete thereafter	T 27
4. Coarseness Factor and Adjusted Workability Factor	Prior to transportation of On the first batch from each day and once for each 250 yd ³ concrete thereafter	<i>Concrete Field Manual</i> , Paragraph 5.5.5
B. PLASTIC CONCRETE		
1. Sampling		T 141
2. Air Content	On the first batch from each day and once for each 50 yd ³ thereafter	T 152 or T 196
3. Slump	On the first batch from each day and once for each 50 yd ³ thereafter	T 119
4. Compressive Strength	One set (two cylinders) for 0-100 yd ³ inclusive and one set for each additional 100 yd ³ or fraction thereof for each class concrete delivered and placed on a calendar day from a single supplier. A test shall be the average of two cylinders.	T 22, T 23, T 231
5. Yield	Each 400 yd ³	T 121
6. Temperature	With each sample	C 1064

Periodic inspection by the Department of the Contractor's QC testing and production will continue through the duration of the project. Weekly reviews will be made of the Contractor's QC records and charts.

For aggregates, comparison of data of the Contractor's QC aggregate gradation test results to those of the Department's QA aggregate gradation test results will be made monthly during concrete production periods. When it is determined that the Contractor's QC test results of aggregate gradations are comparative to that of the Department's QA test results, then the Department will use the Contractor's QC results as a basis for acceptance of the aggregates and the Department's QA testing frequency of aggregates may be reduced to a frequency of no less than three QA tests to every 10 QC tests. If the Contractor's QC aggregate gradation test results

fail to compare to those of the Department's QA aggregate gradation test results, Department testing for aggregate gradations will revert to the frequency shown in Table 5 for aggregates until the Contractor's and Department's aggregate gradation test data compare.

907-804.02.13.1--Basis of Acceptance.

907-804.02.13.1.1--Slump. Slump of plastic concrete shall meet the requirements of Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.2--Air. Total air content of concrete shall be within the specified range for the class of concrete listed in Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.3--Yield. If the yield of the concrete mix design is more than plus or minus 3% of the designed volume, the mix shall be adjusted by a Class III Certified Technician representing the Contractor to yield the correct volume plus or minus three percent ($\pm 3\%$). If batching of the proportions of the mix design varies outside the batching tolerance range of the originally approved proportions by more than the tolerances allowed in Subsection 907-804.02.12., the new proportions shall be field verified per Subsection 907-804.02.10.3.

907-804.02.13.1.4--Temperature. Cold weather concreting shall follow the requirements of Subsection 907-804.03.16.1. Hot weather concreting shall follow the requirements of Subsection 907-804.03.16.2 with a maximum concrete temperature of 90°F. Concrete with a temperature more than the maximum allowable temperature shall be rejected and not used in Department work.

907-804.02.13.1.5--Compressive Strength. For acceptance of the concrete, the compressive strength of laboratory cured concrete compressive strength tests shall conform to the specified strength (f'_c) listed in the specifications. Concrete represented by compressive strength test below the specified strength (f'_c) may be removed and replaced by the Contractor. If the Contractor elects not to remove the material, it will be evaluated by the Department as to the adequacy for the use intended. All samples or other information used by the Department for the evaluation shall be obtained at the direction of the Engineer. All samples obtained by the Contractor used for evaluation by the Department shall be obtained under the supervision of the Engineer. All materials, labor, and all other costs associated with obtaining the samples or other information required by the Department used in the evaluation shall be paid for by the Contractor at no additional cost to the Department. All concrete evaluated as unsatisfactory for the intended use shall be removed and replaced by the Contractor at no additional cost to the Department. When the evaluation indicates that the work may remain in place, the work will be accepted with no reduction in pay.

907-804.02.13.1.6--Tolerances on AWF and CF for Concrete Bridge Decks. The AWF and CF determined in accordance with B.4 from Table 4 and A.4 from Table 5 shall be within the following control limits of the originally established AWF and CF:

$$AWF_{\text{upper control limit}} = AWF_{\text{original}} + \sqrt{4 - (CF_{\text{new}} - CF_{\text{original}})^2}$$

$$AWF_{\text{lower control limit}} = AWF_{\text{original}} - \sqrt{4 - (CF_{\text{new}} - CF_{\text{original}})^2}$$

$$CF_{\text{upper control limit}} = CF_{\text{original}} + \sqrt{4 - (AWF_{\text{new}} - AWF_{\text{original}})^2}$$

$$CF_{\text{lower control limit}} = CF_{\text{original}} - \sqrt{4 - (AWF_{\text{new}} - AWF_{\text{original}})^2}$$

The AWF and CF determine in accordance with B.4 from Table 4 and A.4 from Table 5 shall also be within the limits in Subsection 907-804.02.10.1.b.

The AWF and CF shall be calculated from the most recent aggregate gradations and the batch ticket information from the first batch from each day's production prior to transporting the batch. If the AWF and CF are not within the limits of this subsection, the batch shall be rejected before it is transported to the job site and the necessary adjustments in accordance with Subsection 907-804.02.10.4 required to bring the AWF and CF of the next batch within the limits of this subsection shall be made by the Contractor. Determining the AWF and CF and making mixture adjustments shall be repeated on subsequent batches as many times as required prior to transportation to ensure that the batch meets the AWF and CF are brought within the limits of this Subsection. No concrete shall be placed until the AWF and CF are brought within the limits of this Subsection.

Delete Subsection 804.02.14 on page 861 and substitute the following:

907-804.02.14--Blank.

907-804.03.6--Handling and Placing Concrete.

907-804.03.6.1--General. Delete the third paragraph of Subsection 804.03.6.1 on page 862 and substitute the following:

Except as provided for truck mixers and truck agitators, concrete shall be placed in the forms within 30 minutes after the time that the cementitious materials are first added to the mixture.

Delete Subsection 804.03.6.2 on pages 863 & 864 and substitute the following:

907-804.03.6.2--Consolidation. Concrete mixture, during and immediately after depositing, shall be thoroughly consolidated by the use of approved mechanical vibrators and suitable spading tools. Only concrete mixture which has not achieved initial set shall be consolidated. Hand spading alone will be permitted on small structural members such as railing, small culvert headwalls, and as necessary to ensure smooth surfaces and dense concrete along form surfaces, in corners, and in locations impossible to reach with vibrators. When hand spading is used for consolidation, a sufficient number of workmen with spading tools shall be provided. For hand

spading, flush a thin layer of mortar to all the surfaces and thoroughly and satisfactorily consolidate the concrete.

The entire operation of depositing and consolidating the concrete shall be conducted so that the concrete shall be smooth and dense and free from honeycomb or pockets of segregated aggregate.

Movement of personnel through the consolidated concrete shall not be permitted.

907-804.03.6.2.1--Mechanical Vibration. Mechanical vibration of concrete shall be subject to the following:

1. To verify compliance with these requirements, the Contractor shall provide the Engineer with a copy of the manufacturer's specifications for each type and brand of vibrator used on the project.
2. The Contractor shall provide a sufficient number of personnel with vibrators to properly consolidate each batch immediately after the concrete is placed in the forms. The Contractor shall provide at least one stand-by vibrator and required power source.
3. Concrete having been consolidated shall not be walked in or through. If it is determined it is necessary to step into previously consolidated concrete, the concrete in the stepped into area shall be consolidated again.
4. Internal vibrators shall be of the spud or tube type, meeting the following characteristics and performance:
 - a. The diameter of the head of the vibrator shall be 1 1/4 to 2 1/2 inches.
 - b. The frequency of vibration shall be 8000 to 12000 vibrations per minute (Hz) while operating in the concrete.
 - c. The average amplitude shall be 0.025 to 0.05 inches while operating in air.
 - d. The minimum radius of influence shall be seven (7) inches.
 - e. The length of the vibrator head shall be nearly equal to the depth of the layer of concrete placed.
5. When the reinforcing steel is coated with epoxy, internal vibrators with heads of rubber or other resilient material shall be used. Rubber covers securely fastened over steel heads shall be acceptable.
6. For consolidation of concrete used in concrete bridge decks, the following additional requirements shall apply:
 - a. Only internal vibration shall be used.
 - b. Internal vibrators shall all be of the same type and size.

907-804.03.6.2.2--Method for Internal Vibration. Mechanical vibrators used for internal vibration shall be operated as follows:

1. Vibrators shall not be dragged or moved laterally through the concrete to transport concrete. Vibrators shall not be used in such a manner that the concrete segregates or forms pockets of grout. Vibrators shall not be applied directly or through the reinforcement to sections or layers of concrete which have taken initial set.

2. Vibrators shall only be inserted into the concrete while operating and at the point of placement to consolidate the concrete for such a length of time that there is a general cessation in the escape of large entrapped air bubbles at the surface.
3. Vibrators shall be inserted slowly into the concrete and allowed to penetrate into the concrete under their own weight.
4. Vibrators shall be inserted into the concrete while they are in a vertical position with enough flexibility to work themselves around the reinforcing steel.
5. The head of the vibrator shall be completely submerged in the concrete for a time of consolidation between 3 and 15 seconds prior to removal, unless otherwise defined by the Engineer.
6. For consolidation of two or more layers of concrete, the vibrator shall be inserted into the bottom most layer at least six (6) inches. The vibrator shall be manipulated in a series of up-and-down motions to knit the layers together.
7. Vibrators shall be removed slowly from the concrete after the consolidation has been accomplished. However, once the head of the vibrator has become only partially immersed in the concrete, vibrators shall be removed rapidly.
8. The insertions of the vibrators shall be systematically spaced such that the entire surface of the concrete comes under the influence of the vibrator during consolidation. This includes areas around the reinforcing steel, imbedded fixtures, the corners and angles of forms, and any irregular areas. The distance between insertions shall not exceed 1.5 times the radius of influence such that the area visibly affected by the vibrator overlaps the adjacent, just-vibrated area.
9. For additional information, refer to ACI 309-07, Chapter 7, Sections 7.1 through 7.3

907-804.03.6.4.2--Superstructure. After the last sentence of the first paragraph of Subsection 804.03.6.4.2 on page 865, add the following:

Concrete in areas below the bridge deck but being deposited at the same time as placing concrete for the bridge deck, like a diaphragm, shall be placed and consolidated sufficiently ahead of placing the concrete for the bridge deck such that the placing, consolidating, finishing, and curing of concrete for the bridge deck shall not be impeded or slowed.

907-804.03.8--Pumping Concrete. Delete the second paragraph of Subsection 804.03.8 on page 866 and substitute the following:

Where concrete is conveyed and placed by mechanically applied pressure, the equipment shall be suitable in kind and adequate in capacity for the work. The discharge end of the pump shall be of a configuration such that the concrete does not move in the pump under its own weight. This may be accomplished with an "S" or "O" shaped flexible or rigid conduit or other means acceptable to the Engineer capable of inducing a backpressure on the concrete ensuring that the concrete is pumped and does not free-fall more than five (5) feet.

The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. When pumping is completed, the concrete remaining in the pipe line, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients. After this operation, the entire equipment shall be thoroughly cleaned.

907-804.03.15--Removal of Falsework, Forms, and Housing. Delete the first sentence of the second paragraph of Subsection 804.03.15 on page 871 and substitute the following:

Concrete in the last pour of a continuous superstructure shall have attained a compressive strength of 2,400 psi, as determined by cylinder tests or maturity meter probe, prior to striking any falsework.

Delete the first sentence of the third paragraph of Subsection 804.03.15 on page 871 and substitute the following:

At the Contractor's option and with the approval of the Engineer, the time for removal of forms may be determined by cylinder tests, in accordance with the requirements listed in Table 6, in which case the Contractor shall furnish facilities for testing the cylinders.

Delete the fourth and fifth paragraphs of Subsection 804.03.15 on pages 871 & 872 and substitute the following:

The cylinders shall be cured under conditions which are not more favorable than those existing for the portions of the structure which they represent.

Delete the table in Subsection 804.03.15 on page 872, and substitute the following:

Table 6	
Minimum Compressive Strength Requirements for Form Removal	
Forms:	
Columns	1000 psi
Side of Beams	1000 psi
Walls not under pressure	1000 psi
Slab Spans	2400 psi
Other Parts	1000 psi
Centering:	
Under Beams	2400 psi
Under Bent Caps	2000 psi
Limitation for Placing Beams on:	
Pile Bents, pile under beam	2000 psi
Frame Bents, two or more columns	2200 psi
Frame Bents, single column	2400 psi

Forms for bridge deck slabs overhead and bridge deck slabs between beams shall not be removed sooner than seven (7) days after placing concrete and prior to the concrete having a minimum compressive strength of 2000 psi.

In lieu of using concrete strength cylinders to determine when falsework, forms, and housings can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 7. Falsework,

forms, and housings may be removed when maturity meter readings indicate that the required concrete strength is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T 325 and ASTM Designation: C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

Table 7
Requirements for use of Maturity Meter Probes

Structure Component	Quantity of Concrete	No. of Probes
Slabs, beams, walls, & miscellaneous items	0 - 30 yd ³	2
	> 30 to 60 yd ³	3
	> 60 to 90 yd ³	4
	> 90 yd ³	5
Footings, Columns & Caps	0 - 13 yd ³	2
	> 13 yd ³	3
Pavement, Pavement Overlays	1200 yd ²	2
Pavement Repairs	Per repair or 900 yd ²	2
	Whichever is smaller	

907-804.03.16.2--Hot Weather Concreting. Delete the paragraph in Subsection 804.03.16.2 on page 874 and substitute the following:

The manufacture, placement, and protection of concrete during hot weather requires special attention to ensure that uniform slump ranges and satisfactory placement qualities are maintained, that surface cracking is held to a minimum, and that design strengths are produced.

When the ambient temperature is above 90°F, the forms, reinforcing steel, steel beam flanges, and other surfaces which will come in contact with the concrete shall be cooled to below 90°F by means of a water spray or other approved methods.

When the atmospheric temperature is predicted to be 90°F or above based on the latest information available from the National Weather Service any time during the day of placement or day after placement, the time of placement shall not begin until 5:00 p.m. on the day of placement and shall be completed by 6:00 a.m. the following day.

907-804.03.17--Curing Concrete. Before the first paragraph of Subsection 804.03.17 on page 874, add the following:

Just prior to and at least once per hour during placement of the concrete, the Contractor shall measure and record the air temperature, concrete temperature, wind speed, and relative humidity. These measurements of the air temperature, wind speed, and humidity measurements shall be taken approximately 12 inches above the surface of the deck. For the initial evaporation rate taken just prior to placement, the concrete temperature shall be assumed to be the maximum allowable, per Subsection 907-804.02.13.1.4. During the placement, the concrete temperature

shall be from the most recent measurement. With this information, the Contractor shall determine and record the evaporation rate using the following equation.

$$\text{Evaporation Rate} = \left(T_C^{2.5} - \frac{\%RH}{100} \times T_A^{2.5} \right) \times (1 + 0.4 \times V_{\text{wind}}) \times 10^{-6}$$

where

T_C = concrete temperature (°F)

T_A = air temperature (°F)

%RH = relative humidity (%)

V_{Wind} = wind velocity (mph)

As a general guideline, the potential for plastic shrinkage cracks increases when the evaporation rate exceeds 0.2 lb/ft²/hr, or for concrete mixtures with a bleed rate less than this, when the evaporation rate exceeds the bleed rate of the concrete.

Delete the third paragraph of Subsection 804.03.17 on pages 874 & 875 and substitute the following:

Surfaces on which curing is to be by liquid membrane shall be given the required surface finish prior to the application of curing compound. Finishing is complete when the pan drag, burlap drag, or other is complete. Concrete surfaces cured by the liquid membrane method shall receive two applications of curing compound. Neither application shall be made from a position supported by or in contact with the freshly placed concrete. Both applications shall be applied perpendicularly to the surface of the concrete.

The first application shall be applied within 10 minutes of the initial pass of the screed. The second application shall be applied within 30 minutes after the first application. The liquid membrane shall be uniformly applied to all exposed concrete surfaces. The minimum rate of application of each coating of liquid membrane shall be no less than the minimum recommended by the liquid membrane producer and no less than one gallon per 200 square feet of concrete surface.

The application of liquid membrane shall be accomplished by the use of power applied spray equipment using nozzles and other equipment recommended by the liquid membrane producer. Manually pressurized or manual pump-up type sprayers shall not be used to apply the first two applications of liquid membrane.

As a rule of thumb, the color of concrete covered with the required amount of liquid membrane should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five (5) feet away horizontally if standing on the same grade as the concrete.

The Contractor shall make available to the Engineer an application rate verification method and any information necessary during application of the liquid membrane to verify that the rate of application meets the prescribed rate for the various surfaces of the concrete, including, but not

limited to, the top surface of the bridge deck and exposed sides of the bridge deck after any forms are removed. The Contractor shall submit this application verification method to the Engineer in accordance with Subsection 907-804.02.12.1.1.

The coating shall be protected against marring for at least 10 days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Manually pressurized or manual pump-up type sprayers may be used for giving marred areas the required additional application of liquid membrane. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

Delete the fifth paragraph of Subsection 804.03.17 on page 875, and substitute the following:

When using liquid membrane, the liquid membrane shall be thoroughly mixed within the time recommended by the liquid membrane producer but no more than an hour before use. If the use of liquid membrane results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

Add after the last paragraph of Subsection 804.03.17 on page 875 the following:

All pedestrian walkway surfaces shall be cured in the same manner and, if placed with the bridge deck, at the same time as the bridge deck.

Delete the title of Subsection 804.03.19.7 on page 884, and substitute the following:

907-804.03.19.7--Finishing Bridge Decks.

Delete Subsection 804.03.19.7.1 on page 884, and substitute the following:

907-804.03.19.7.1--General. Concrete bridge decks shall be struck off and finished by the transverse method subject to the requirements contained in these specifications.

Except when indicated otherwise on the plans, the finish of the bridge deck shall be either, a belt finish, a broom finish, or one of the following drag methods: pan, burlap, or pan and burlap. The finish shall be applied using equipment mounted to the strike-off screed. Manual finishing of the bridge deck shall be performed only in areas inaccessible by the finishing equipment mounted to the strike-off screed, but shall not hinder the requirements for curing in accordance with Subsection 907-804.03.17.1. The surface texture specified and surface requirements shall be in accordance with the applicable requirements of Subsections 501.03.17 and 501.03.18 modified only as the Engineer deems necessary for bridge deck construction operations.

At no time shall water on the surface of the concrete from bleeding, fogging, curing, or other sources be worked into the concrete or used as an aid for finishing.

Delete Subsection 804.03.19.7.2 on pages 884 & 885, and substitute the following:

907-804.03.19.7.2--Blank.

907-804.03.19.7.3--Transverse Method. Delete the first sentence of the second paragraph of Subsection 804.03.19.7.3 on page 885, and substitute the following:

The machine shall be so constructed and operated as to produce a bridge deck of uniform density with minimum manipulation of the fresh concrete and achieved in the shortest possible time.

Delete the fourth paragraph of Subsection 804.03.19.7.3 on page 885, and substitute the following:

At least one dry run shall be made the length of each pour with a "tell-tale" device attached to the screed carriage to assure the specified clearance to the reinforcing steel.

Delete the last sentence of the fifth paragraph of Subsection 804.03.19.7.3 on page 885, and substitute the following:

The screed shall be mechanically actuated to deliver the screeding action and for travel in a longitudinal direction at a uniform rate along the bridge deck.

Delete the last paragraph of Subsection 804.03.19.7.3 on page 886, and substitute the following:

Other finishing requirements shall be in accordance with the general requirements in Subsection 907-804.03.19.7.1 and as specified on the plans. Regardless of the finish, the requirements for curing per Subsection 907-804.03.17 shall be completed within the specified time limits.

Delete the title of Subsection 804.03.19.7.4.1.3 on page 888, and substitute the following:

907-804.03.19.7.4.1.3--Final Surface Texture.

907-804.03.20.2--Construction Traffic. Delete the paragraph in Subsection 804.03.20.2 on page 889 and substitute the following:

Unless otherwise specified, concrete bridge decks shall be closed to construction traffic for the time required for curing per Subsection 907-804.03.17 and its subsequent paragraphs and until the required compressive strength for the concrete is obtained.

907-804.05--Basis of Payment. Add the "907" prefix to pay item 804-A on page 898.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 – NOTICE TO BIDDERS NO. 2193

CODE: (SP)

DATE: 12/9/2008

SUBJECT: Petroleum Products Base Prices For Contracts Let in January, 2009

REFERENCE: Subsection 109.07

The following base prices are to be used for adjustment in compensation due to changes in costs of petroleum products:

FUELS

	<u>Per Gallon</u>	<u>Per Liter</u>
Gasoline	\$1.2707	\$0.3357
Diesel	\$1.8635	\$0.4923

MATERIALS OF CONSTRUCTION

<u>ASPHALT CEMENT</u>	<u>Per Gallon</u>	<u>Per Ton</u>	<u>Per Liter</u>	<u>Per Metric Ton</u>
Viscosity Grade AC-5	\$2.2930	\$544.00	\$0.6057	\$599.65
Viscosity Grade AC-10	\$2.2937	\$544.17	\$0.6059	\$599.83
Viscosity Grade AC-20	\$2.2621	\$536.67	\$0.5976	\$591.57
Viscosity Grade AC-30	\$2.2410	\$531.67	\$0.5920	\$586.06
Grade PG 64-22	\$2.2129	\$525.00	\$0.5846	\$578.70
Grade PG 67-22	\$2.2087	\$524.00	\$0.5835	\$577.60
Grade PG 76-22	\$2.8522	\$676.67	\$0.7535	\$745.89
Grade PG 82-22	\$3.0840	\$731.67	\$0.8147	\$806.51

EMULSIFIED ASPHALTS, PRIMES, & TACK COATS

Grade EA-4 (SS-1)	\$2.3389	\$0.6179
Grade RS-2C (CRS-2)	\$2.3726	\$0.6268
Grade CRS-2P	\$2.7247	\$0.7198
Grade EA-1, MC-70 & AE-P	\$2.6436	\$0.6984
Grade SS-1 & 1H	\$2.5250	\$0.6670
Grade CSS-1 & 1H (Undiluted)	\$2.6000	\$0.6868
Grade CSS-1 & 1H (Diluted 1 to 1 Fog Seal)	\$1.5450	\$0.4081



BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____
Contractor

Address

City, State ZIP

as Principal, hereinafter called the Principal, and _____

a corporation duly organized under the laws of the state of _____

as Surety, hereinafter called the Surety, are held and firmly bound unto State of Mississippi, Jackson, Mississippi

As Obligee, hereinafter called Obligee, in the sum of **Five Per Cent (5%) of Amount Bid**

Dollars (\$ _____)

for the payment of which sum will and truly to be made, the said Principal and said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for **Construction necessary to replace the bridge on SR 15, between SR 19 and the Winston County Line, known as Federal Aid Project No. BR-0022-02(049) / 104632301, in the County of Neshoba, State of Mississippi.**

NOW THEREFORE, the condition of this obligation is such that if the aforesaid Principal shall be awarded the contract, the said Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this obligation to be void; otherwise the Principal and Surety will pay unto the Obligee the difference in money between the amount of the bid of the said Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former, but in no event shall liability hereunder exceed the penal sum hereof.

Signed and sealed this _____ day of _____, 2009

(Principal) (Seal)

(Witness)

By: _____
(Title)

(Surety) (Seal)

(Witness)

By: _____
(Attorney-in-Fact)

MS Resident or Qualified Non-Resident Agent